

WHAT IS CLAIMED IS:

1. A method of producing a ligand:receptor complex, comprising contacting:

- 5 a) a substantially pure or recombinant mammalian IL-1 δ or IL-1 ϵ with a receptor comprising the IL-1R6 receptor subunit; or
- 10 b) a mammalian IL-1 δ or IL-1 ϵ with a receptor comprising a substantially pure or recombinant IL-1R6 receptor subunit;

thereby allowing said complex to form.

2. The method of Claim 1, wherein:

- 15 a) said complex results in modulation of NFkB activation;
- 16 b) said receptor is on a cell;
- 17 c) said complex formation results in a physiological change in the cell expressing said receptor;
- 20 d) said contacting is in combination with an anti-inflammatory agent; or
- 21 e) said contacting allows quantitative detection of said ligand.

25 3. The method of Claim 2, wherein said receptor is on a skin cell.

30 4. A method of modulating physiology or development of an IL-1R6 receptor expressing cell comprising contacting said cell to an exogenous agonist or antagonist of a mammalian IL-1 δ or IL-1 ϵ .

35 5. The method of Claim 4, wherein:

- A) said antagonist is:
- 36 1) an antibody which:

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- 5 a) neutralizes said mammalian IL-1 δ ; or
 b) neutralizes said mammalian IL-1 ϵ ; or
2) a mutein of said IL-1 δ or IL-1 ϵ ;
- 10 B) said physiology is selected from:
 1) proliferation;
 2) tissue remodeling; or
 3) production of inflammatory mediators, including
 cytokines, chemokines, or adhesion molecules;
 or
 C) said modulating is specific for epithelial cells and
 not endothelial cells.

15 6. The method of Claim 4, wherein:
 a) said antagonist is an antibody and said physiology is
 an inflammatory response; or
 b) said modulating is specific for Th2 cells and not Th1
 cells.

20 7. The method of Claim 4, wherein said modulating is
 blocking, and said physiology is an inflammatory response.

25 8. A method of modulating a signal to a cell mediated
 by IL-1 δ or IL-1 ϵ comprising contacting said cell to an
 administered agonist or antagonist of IL-1R6.

9. The method of Claim 8, wherein said modulating is
 inhibiting, and said signal is a pro-inflammatory signal.

10. The method of Claim 9, wherein:

30 a) said antagonist is a neutralizing antibody to IL-1R6;
 b) said agonist or antagonist is administered in
 combination with an antagonist or agonist of CXCR1,
 CXCR2, or CCR6; or

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- c) said agonist or antagonist is administered in combination with a growth factor, cytokine, chemokine, or immune adjuvant.

5 11. The method of Claim 9, wherein said contacting is with another anti-inflammatory agent.

12. A method of selectively labeling a population of cells, said method comprising contacting said cells with an 10 IL-1R6 antibody or a cytokine selected from IL-1 δ or IL-1 ϵ , thereby resulting in the identification of cells expressing IL-1R6.

13. The method of Claim 12, wherein:

- 15 a) said contacting results in modulation of NFkB activation;
- b) said labeling allows purification of IL-1R6+ cells; or
- c) said labeling allows depletion of IL-1R6+ cells.

20 14. A population of cells made by the method of Claim 13.

15. The population of Claim 14, which:

- 25 a) bind anti-IL-1R6 antibody or antiserum; or
- c) are prepared by Fluorescent Activated Cell Sorting with a labeled IL-1R6 selective:
- 1) ligand;
- 2) antibody; or
- 30 3) binding compound comprising the antigen binding portion from an antibody which selectively binds IL-1R6.

16. A method of testing a compound for ability to affect IL-1R6 receptor-ligand interaction, said method comprising comparing the interaction of IL-1R6 with IL-1 δ or IL-1 ϵ in the presence and absence of said compound.

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17. The method of Claim 16, wherein said compound is an antibody against IL-1R6, IL-1 δ , or IL-1 ϵ .

18. An isolated or recombinant polynucleotide which:

- 10 a) encodes at least 15 contiguous amino acid residues of SEQ ID NO: 2;
- b) encodes at least two distinct segments of at least 8 contiguous amino acid residues of SEQ ID NO 2;
- c) comprises one or more segments at least 21 contiguous nucleotides of SEQ ID NO: 1;
- d) encodes at least 15 contiguous amino acid residues of SEQ ID NO: 4;
- e) encodes at least two distinct segments of at least 8 contiguous amino acid residues of SEQ ID NO 4; or
- f) comprises one or more segments at least 21 contiguous nucleotides of SEQ ID NO: 3.

19. An isolated or recombinant antigenic polypeptide comprising at least:

- 25 a) one segment of 12 identical contiguous amino acids from SEQ ID NO: 2;
- b) at least two distinct segments of 8 identical contiguous amino acids from SEQ ID NO: 2;
- c) one segment of 12 identical contiguous amino acids from SEQ ID NO: 4; or
- d) at least two distinct segments of 8 identical contiguous amino acids from SEQ ID NO: 4.

20. A binding compound comprising an antigen binding portion from an antibody which binds with selectivity to a polypeptide of Claim 19.